

MEMORANDUM

INTERMOUNTAIN POWER SERVICE CORPORATION

TO: S. Gale Chapman

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FROM: Dennis K. Killian

DATE: September 15, 1999

SUBJECT: Recommendation to Purchase B&W Rotating Throat

We recommend purchasing two additional sets of B&W Rotating Throats for installation in the Unit 1C and 2F Pulverizers (or as determined by Maintenance). Please approve the installation of the B&W Clockwise Rotating Throat by signing the attached purchase requisition.

The B&W Clockwise RTs installed in the Unit 1 and Unit 2 "1H" Pulverizers have been in operation for approximately 3 years and 2 years, respectively. Extensive testing of the throat has produced the following positive results:

- The rotating throats provide improved fineness of approximately 5% over stationary throats.
- Erosion surveys (ultrasonic) confirm that the rotating throats should last over twice as long as the current stationary throats; and do not increase localized erosion on mill internals.
- The rotating throats have proven to reject rock more effectively than stationary throats. This will reduce mill maintenance, boiler slag, and increase combustion stability.
- RT material cost is 40% lower than that of the stationary throat (ST) set.

The existing stationary pulverizer throats continue to show accelerated deterioration. The Unit 1C mill lower throat has cracked and Unit 2F mill lower throat has worn significantly on both upper and lower surfaces. These lower throats are cast from gray iron, which does not allow quality repair. Because the lower throats in these two mills should be replaced, they are excellent candidates for receiving the next rotating throats.

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Rock reject rate, with the rotating throat, is about 3 times that of the stationary throat. With normal fuel quality, rotating throats require rejects be pulled approximately 4 minutes in each 2 hour interval per mill; or estimated at a total of 2.5 hrs per shift. With high rock percentages in the fuel, the time required to clear the rejects hopper with rotating throats increases to approximately 12 minutes per mill every hour. This means that even if the equipment all works as expected the operator, under high rock conditions, is doing little else than dealing with rejects.

We are currently preparing a capital improvement package for staff approval within the upcoming budget year to improve the effectiveness of the reject systems. We will provide system design improvements to minimize operator time required to deal with rejects under all circumstances.

Increasing the PA duct pressure from 42"w.c. to 48"w.c., during periods of high rock-in-fuel, has been shown to bring pulverizer differential concerns under control. Please direct questions and comments to Phong Do at Extension 6475.

PTD/JHN:db  
Attachments

cc: George Cross  
Joe D. Hamblin